SECTION 1

INTRODUCTION

1.1 GENERAL

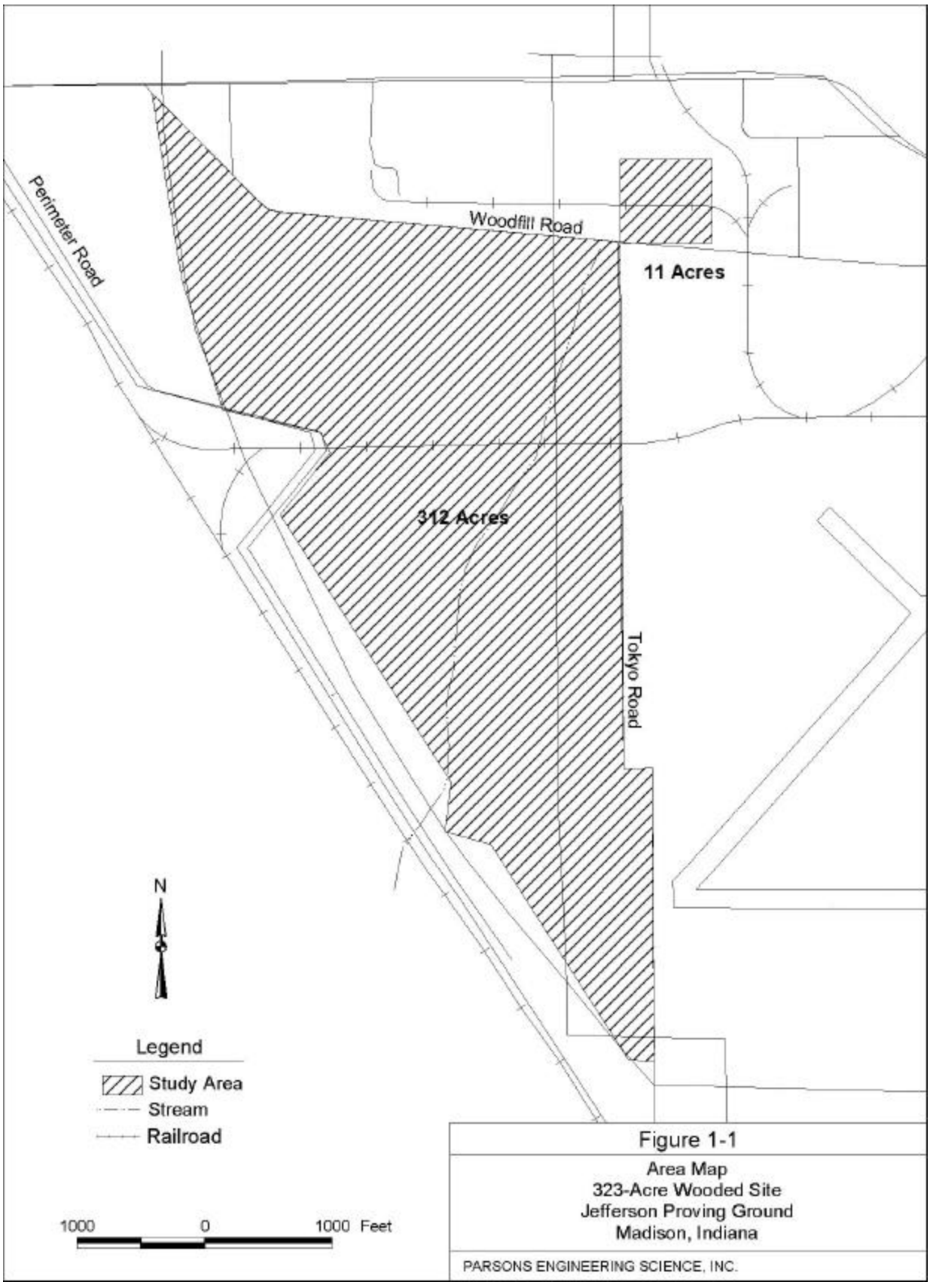
Parsons Engineering Science, Inc. (Parsons ES) will perform an ordnance and explosives (OE) Engineering Evaluation/Cost Analysis (EE/CA) investigation of a 323-acre wooded site at Jefferson Proving Ground (JPG), Indiana under Contract DACA87-95-D-0018, Delivery Order 0042 for the U.S. Army Engineering and Support Center, Huntsville (USAESCH). The actions performed under this contract will be performed consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (NCP).

1.2 SITE DESCRIPTION AND HISTORY

1.2.1 JPG, a U.S. Army installation, is situated on 55,264 acres in Jefferson, Ripley, and Jennings Counties, Indiana (Figure 1-1). The installation is generally rectangular in shape with approximate dimensions of 18 miles in the north-south direction by about five and one-half miles in the east-west direction. The main gate of the installation is approximately five miles north of Madison, Indiana and 56 miles northeast of Louisville, Kentucky. JPG was used as a U.S. Army Proving Ground between 1941 and 1995. Based on historic data, of the more than 27 million OE items tested at JPG's ranges, approximately 1.5 million may remain at the site. The OE items range in size from small caliber firearms projectiles to 2,000 pound bombs.

1.2.2 Prior to Department of Defense (DOD) ownership, land use was made up of small family farms and forested areas. When DOD took over the property in late 1940 several small communities were condemned and about 500 families were relocated.

1.2.3 The mission of JPG included performing production and post-production tests of conventional ammunition components and other OE items. Units at JPG also conducted tests of ammunition propellants and other weapon systems components and tested and evaluated all


Perimeter Road
Woodfill Road
11 Acres
312 Acres
Tokyo Road
N
Legend
Study Area
Stream
Railroad
1000 0 1000 Feet
Figure 1-1
Area Map
323-Acre Wooded Site
Jefferson Proving Ground
Madison, Indiana
PARSONS ENGINEERING SCIENCE, INC.

types of munitions. Units at JPG performed this function almost continuously until September 1994. The facility closed on September 30, 1995 and its mission was reassigned to Yuma Proving Ground in Arizona.

1.2.4 The area where the OE EE/CA field investigation will take place consists of two wooded areas that are located just west of the base's runways (see Figure 1). The larger of the two areas is approximately 312 acres, while the smaller of the two areas is approximately 11 acres. The larger area is bordered by Tokyo Road in the east, Woodfill Road in the north, and by an arc running just to the east of Perimeter Road to the west. The smaller of the two areas is located north and east of the larger area and is bordered by Woodfill Road to the south and Tokyo Road to the west. The site lies behind the main firing line and, as a result, large caliber projectiles or bombs are not likely to be encountered here. However, it is possible that the area may contain mortar rounds, rockets, or other munitions used by light infantry units.

1.3 PREVIOUS INVESTIGATIONS

1.3.1 From October through December 1996 Human Factors Applications, Inc. performed an OE Time-Critical Removal Action (TCRA) in selected areas south of the firing line.

1.3.2 From August 1997 to the present UXB International, Inc. (UXB) has been performing an OE clearance operation of approximately 575 acres south of the firing line in and around the airfield and of the paved section of Woodfill Road extending 3,000 feet west of the eastern boundary of JPG.

1.3.4 According to the *Archive Search Report (ASR) for Jefferson Proving Ground at Madison, Indiana* (June 1995) nine environmental Hazardous and Toxic Waste (HTW) investigations have been performed at JPG as a result of the Installation Restoration Program (IRP) and the closing of the facility. Table 1.1 provides an overview of these investigations. The ASR contains a more complete summary of these investigations. Based on a review of the

TABLE 1.1

PREVIOUS HTW INVESTIGATIONS CONDUCTED AT JPG

Title	Agency	Author	Date
Installation Assessment Relook Program Working Document - Jefferson Proving Ground	Environmental Photographic Interpretation Center (EPIC) of the US Environmental Protection Agency	Bionetics Corp	June 1986
Update of the Initial Installation Assessment of Jefferson Proving Ground	US Army Toxic and Hazardous Material Agency	Environmental Science and Engineering, Inc.	Jan 1988
Final Report - Ground Water Contamination Survey No. 38-26-0306-89 - Evaluation of Solid Waste Management Units (SWMU) - Jefferson Proving Ground	US Army Environmental Hygiene Agency	US Army Environmental Hygiene Agency	May 1989
Enhanced Preliminary Report - Jefferson Proving Ground	US Army Toxic and Hazardous Material Agency	Ebasco Environmental	Mar 1990
Preliminary Review / Visual Site Inspection - Jefferson Proving Ground	US Environmental Protection Agency	A.T. Kearny, Inc.	Feb 1992
Cleanup and Reuse Options - U.S. Army - Jefferson Proving Ground	US Army Armament, Munitions and Chemical Command	Mason and Hangar - Silas Mason Co., Inc.	Apr 1992
Preliminary Site Inspection Report for Jefferson Proving Ground	US Army Environmental Center	Advanced Sciences, Inc.	Aug 1993
Community Environmental Response Facilitation Act (CERFA) Report - Jefferson Proving Ground	US Army Environmental Center	The Earth Technology Corp.	Apr 1994
Jefferson Proving Ground - South of the Firing Line - Final Draft Remedial Investigation - Volume I	US Army Environmental Center	Rust Environmental and Infrastructure Corp.	July 1994

available documentation that includes these summaries in the ASR as well as information gained during the site visit, there are no HTW concerns for the work area specified for this OE EE/CA investigation.

1.4 PROJECT OBJECTIVE

1.4.1 The objective of Delivery Order 0042 is to determine the best alternative to rectify the risks attributable to OE located at the 323-acre wooded site. Parsons ES will perform an intrusive investigation of 89 anomalies previously identified at the site and prepare an EE/CA study of the results of the field investigation. The EE/CA will be used to establish the location of the source area of the OE, determine the quantity of OE requiring remediation, and define techniques applicable to the recovery and disposal of OE. The EE/CA will also be used to support the determination for subsequent action at the site. Development of data for use in the EE/CA will entail a review of available site history, aerial photographs, real estate transfer documents, and other historical information; the previously conducted geophysical survey; and an on-site assessment of suspected areas of OE contamination. OE sampling, based on the recently completed geophysical survey, and a statistical analysis of the results will be performed to determine potential hazards and propose appropriate solutions for any on-site OE contamination identified. An institutional analysis will also be performed during the project to determine the applicability of institutional controls as a response alternative for the site.

1.4.2 This Work Plan describes the following major components of the JPG OE EE/CA project:

- ?? Perform a site visit and records review;
- ?? Prepare a project Work Plan;
- ?? Perform OE sampling;
- ?? Turn in of recovered inert ordnance and OE related scrap;
- ?? Prepare an institutional analysis;
- ?? Prepare an EE/CA Report; and
- ?? Prepare an EE/CA Action Memorandum.

1.4.3 These tasks are to be accomplished safely, quickly and with a minimum amount of disruption to the existing activities at the site.

1.5 ORGANIZATION OF THE WORK PLAN

This Work Plan is divided into eight sections and two appendices. The eight sections include an Introduction (Section 1), Statement of Work (Section 2), Project and Personnel Management

(Section 3), Institutional Analysis Plan (Section 4), Risk Evaluation Procedures (Section 5), Intrusive Investigation Plan (Section 6), Regulatory Compliance and Environmental Protection Plan (Section 7), and Project Schedule (Section 8). The two appendices to this Work Plan include the Statement of Work (Appendix A) and the USAESCH approval letter to use the existing UXB Work Plan to perform the field work on the project.